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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/750,165

12/31/2003

J. Nelson Wright

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EXAMINER

KHOLDEBARIN, IMAN K

ART UNIT

PAPER NUMBER

3737

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/750,165	<b>Applicant(s)</b> WRIGHT ET AL.	
	<b>Examiner</b> I Kenneth Kholdebarin	<b>Art Unit</b> 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 32-38 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 and 32-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/15/06, 08/28/06</u> | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 1,6-11,16,19,23,32 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1,4, 7, 10 11,12 and 13 of U.S. Patent No. 7,026,927. Although the conflicting claims are not identical, they are not patentably distinct from each other because all are claiming the same system using the relevant method for performing the same function.

Furthermore claims are not patentably distinct because the instant claims are broader & therefore anticipated by the conflicting claims. The instant claims are broader in that they are not specific to “exciting pulses are emitted in a non-periodic manner”.

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-15 as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Da Silva et al. (US 6,729,336).

Re Claim 1-10: Da Silva teaches a method and apparatus which detect in stent restenosis. This system contains electromagnetic wave transmitter to excite the stent an acoustic sensor to detect stent acoustic oscillation. Da Silva discloses that an ultrasound transducer that detects the excited ultrasound oscillations for analysis to detect a change in the aperture (i.e., lumen) for blood flow within the stent. Furthermore Da Silva discloses RF excitation, Probing RF resonant modes, Detecting RF radiation. Using Radio Frequency EM energy to interrogate the stent, the frequency of the RF energy is scanned, and the response of the stent is detected, in reflection, absorption, scatter, or other characteristic EM phenomena, by detecting the modified RF energy. This includes the detection of shifted frequencies that are produced by modifications to the stent. (Fig. 5, col 3, line 19-25).

In another embodiment Da Silva shows the patient's chest is placed between a pair of coils or near an antenna and the stent excited over a range of EM wave frequencies and modulation frequencies. The EM wave range of frequencies is selected to effectively couple energy into the stent (e.g., 100 MHz-10 GHz). The modulation frequencies range is selected to cover the

characteristic acoustic resonance frequencies of the stent (e.g., 100 kHz-1 MHz). The ultrasound (or acoustic) detector measures the generated acoustic signal as a function of the EM wave frequencies. The measured acoustic spectrum will change when in-stent restenosis occurs, (Col. 4, line 16-25).

Re Claim 11- 15: Embodiments of the present invention utilize an electromagnetic wave (EM) transmitter (100 MHz-1 GHz) to excite acoustic oscillations in a stent that are then detected using an ultrasound transducer. FIG. 1 shows the key components of an embodiment of the system. The system includes an electronic control unit 30 that is connected through a cable 40 to an electromagnetic wave transmitter 50 and an ultrasound detector 60. The electromagnetic wave is transmitted through the chest of the patient 10 and excites the implanted stent 20. When excited the implanted stent 20 generates acoustic waves that are detected by the ultrasound detector 60. The control unit 30 can generate electromagnetic waves over a wide frequency range that can be effectively coupled into the conductive stent 20. The control unit 30 can include a computer for data analysis, and archiving. A monitor 70 is used to guide the user and display results.

4. Claims 1-27 and 32-38 as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Mate et al. (US 2002/0193685).

Re Claim 1-27 and 32-38: Mate discloses the system (10) and method of tracking the position of a target within a body. The system is a target locating and monitoring system usable with a radiation delivery source that delivers selected doses of radiation to a target in a body. The system includes one or more excitable markers positionable in or near the target, an external

excitation source that remotely excites the markers to produce an identifiable signal, and a plurality of sensors spaced apart in a known geometry relative to each other. A computer is coupled to the sensors and configured to use the marker measurements to identify a target isocenter within the target. (Fig. 1, 12 and 15)

### **Conclusion**


5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (Please see attached "notice of references cited").

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I Kenneth Kholdebarin whose telephone number is 571-270-1347. The examiner can normally be reached on M-F 8 AM- 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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07/18/2007

  
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